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#### SEQUENCE LISTING

- (1) GENERAL INFORMATION:
  - (i) APPLICANT: The Wistar Institute Bayer Corporation
  - (ii) TITLE OF INVENTION: Peptides and Peptidomimetics with Structural Similarity to Human p53 That Activate p53 Function
  - (iii) NUMBER OF SEQUENCES: 35
  - (iv) CORRESPONDENCE ADDRESS:
    - (A) ADDRESSEE: Banner & Allegretti, Ltd.
    - (B) STREET: 1001 G Street, N.W.
    - (C) CITY: Washington, D.C.
    - (D) STATE: District of Columbia
    - (E) COUNTRY: U.S. (F) ZIP: 20001
  - (v) COMPUTER READABLE FORM:
    - (A) MEDIUM TYPE: Floppy disk

    - (B) COMPUTER: IBM PC compatible (C) OPERATING SYSTEM: PC-DOS/MS-DOS
    - (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
  - (vi) CURRENT APPLICATION DATA: PCT
    - (A) APPLICATION NUMBER:
    - (B) FILING DATE:
    - (C) CLASSIFICATION:
  - (vii) PRIOR APPLICATION DATA: USA
    - (A) APPLICATION NUMBER: 08/392,542 (B) FILING DATE: 02-16-95
  - (viii) ATTORNEY/AGENT INFORMATION:
    - (A) NAME: Hoscheit, Dale H.
    - (B) REGISTRATION NUMBER: 19,090
    - (C) REFERENCE/DOCKET NUMBER: 0486.53880
    - (ix) TELECOMMUNICATION INFORMATION:
      - (A) TELEPHONE: 202 508-9100 (B) TELEFAX: 202 508-9299
- (2) INFORMATION FOR SEQ ID NO:1:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 1317 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM: Homo sapiens
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

GGCTGGGAGC	GTGCTTTCCA	CGACGGTGAC	ACGCTTCCCT	GGATTGGCAG	CCAGACTGCC	120
TTCCGGGTCA	CTGCCATGGA	GGAGCCGCAG	TCAGATCCTA	GCGTCGAGCC	CCCTCTGAGT	180
CAGGAAACAT	TTTCAGACCT	ATGGAAACTA	CTTCCTGAAA	ACAACGTTCT	GTCCCCCTTG	240
CCGTCCCAAG	CAATGGATGA	TTTGATGCTG	TCCCCGGACG	ATATTGAACA	ATGGTTCACT	300
GAAGACCCAG	GTCCAGATGA	AGCTCCCAGA	ATGCCAGAGG	CTGCTCCCCC	CGTGGCCCCT	360
GCACCAGCAG	CTCCTACACC	GGCGGCCCCT	GCACCAGCCC	CCTCCTGGCC	CCTGTCATCT	420
TCTGTCCCTT	CCCAGAAAAC	CTACCAGGGC	AGCTACGGTT	TCCGTCTGGG	CTTCTTGCAT	480
TCTGGGACAG	CCAAGTCTGT	GACTTGCACG	TACTCCCCTG	CCCTCAACAA	GATGTTTTGC	540
CAACTGGCCA	AGACCTGCCC	TGTGCAGCTG	TGGGTTGATT	CCACACCCCC	GCCCGGCACC	600
CGCGTCCGCG	CCATGGCCAT	CTACAAGCAG	TCACAGCACA	TGACGGAGGT	TGTGAGGCGC	660
TGCCCCCACC	ATGAGCGCTG	CTCAGATAGC	GATGGTCTGG	CCCCTCCTCA	GCATCTTATC	720
CGAGTGGAAG	GAAATTTGCG	TGTGGAGTAT	TTGGATGACA	GAAACACTTT	TCGACATAGT	780
GTGGTGGTGC	CCTATGAGCC	GCCTGAGGTT	GGCTCTGACT	GTACCACCAT	CCACTACAAC	840
TACATGTGTA	ACAGTTCCTG	CATGGGCGGC	ATGAACCGGA	GGCCCATCCT	CACCATCATC	900
ACACTGGAAG	ACTCCAGTGG	TAATCTACTG	GGACGGAACA	GCTTTGAGGT	GCGTGTTTGT	960
GCCTGTCCTG	GGAGAGACCG	GCGCACAGAG	GAAGAGAATC	TCCGCAAGAA	AGGGGAGCCT	1020
CACCACGAGO	TGCCCCCAGG	GAGCACTAAG	CGAGCACTGC	CCAACAACAC	CAGCTCCTCT	1080
CCCCAGCCAA	AGAAGAAACC	ACTGGATGGA	GAATATTTCA	CCCTTCAGAT	CCGTGGGCGT	1140
GAGCGCTTCG	AGATGTTCCG	AGAGCTGAAT	GAGGCCTTGG	AACTCAAGGA	TGCCCAGGCT	1200
GGGAAGGAG	CAGGGGGGAG	CAGGGCTCAC	: TCCAGCCACC	TGAAGTCCAA	AAAGGGTCAG	1260
	GCCATAAAA					1317

#### (2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 393 amino acids

  - (B) TYPE: amino acid
    (C) STRANDEDNESS: unknown
    (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM: Homo sapiens
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Met Glu Glu Pro Gln Ser Asp Pro Ser Val Glu Pro Pro Leu Ser Gln

Glu Thr Phe Ser Asp Leu Trp Lys Leu Leu Pro Glu Asn Asn Val Leu 25

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Ser Pro Leu Pro Ser Gln Ala Met Asp Asp Leu Met Leu Ser Pro Asp Asp Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro Asp Glu Ala Pro Arg Met Pro Glu Ala Ala Pro Pro Val Ala Pro Ala Pro Ala Ala Pro Thr Pro Ala Ala Pro Ala Pro Ala Pro Ser Trp Pro Leu Ser Ser Ser Val Pro Ser Gln Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu Gly Phe Leu His Ser Gly Thr Ala Lys Ser Val Thr Cys Thr Tyr Ser Pro Ala Leu Asn Lys Met Phe Cys Gln Leu Ala Lys Thr Cys Pro Val Gln Leu Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val Arg Ala Met 155 Ala Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val Val Arg Arg Cys Pro His His Glu Arg Cys Ser Asp Ser Asp Gly Leu Ala Pro Pro Gln 185 His Leu Ile Arg Val Glu Gly Asn Leu Arg Val Glu Tyr Leu Asp Asp Arg Asn Thr Phe Arg His Ser Val Val Val Pro Tyr Glu Pro Pro Glu Val Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr Met Cys Asn Ser 235 Ser Cys Met Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr Leu Glu Asp Ser Ser Gly Asn Leu Leu Gly Arg Asn Ser Phe Glu Val Arg Val Cys Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn Leu Arg Lys Lys Gly Glu Pro His His Glu Leu Pro Pro Gly Ser Thr Lys Arg Ala Leu Pro Asn Asn Thr Ser Ser Pro Gln Pro Lys Lys 310 Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu Arg Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp 345 Ala Gln Ala Gly Lys Glu Pro Gly Gly Ser Arg Ala His Ser Ser His 360

Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu Met 370 380

Phe Lys Thr Glu Gly Pro Asp Ser Asp 385 390

- (2) INFORMATION FOR SEQ ID NO:3:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 390 amino acids
    - (B) TYPE: amino acid
    - (C) STRANDEDNESS: unknown
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: protein
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM: Mus spretus
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
  - Met Thr Ala Met Glu Glu Ser Gln Ser Asp Ile Ser Leu Glu Leu Pro
  - Leu Ser Gln Glu Thr Phe Ser Gly Leu Trp Lys Leu Leu Pro Pro Glu 25 30
  - Asp Ile Leu Pro Ser Pro His Cys Met Asp Asp Leu Leu Pro Gln 35 40 45
  - Asp Val Glu Glu Phe Phe Glu Gly Pro Ser Glu Ala Leu Arg Val Ser 50 55
  - Gly Ala Pro Ala Ala Gln Asp Pro Val Thr Glu Thr Pro Gly Pro Val 65 70 75 80
  - Ala Pro Ala Pro Ala Thr Pro Trp Pro Leu Ser Ser Phe Val Pro Ser 85
  - Gln Lys Thr Tyr Gln Gly Asn Tyr Gly Phe His Leu Gly Phe Leu Gln 100 105 110
  - Ser Gly Thr Ala Lys Ser Val Met Cys Thr Tyr Ser Pro Pro Leu Asn 115 120 125
  - Lys Leu Phe Cys Gln Leu Val Lys Thr Cys Pro Val Gln Leu Trp Val
  - Ser Ala Thr Pro Pro Ala Gly Ser Arg Val Arg Ala Met Ala Ile Tyr 145 150 155 160
  - Lys Lys Ser Gln His Met Thr Glu Val Val Arg Arg Cys Pro His His 165
  - Glu Arg Cys Ser Asp Gly Asp Gly Leu Ala Pro Pro Gln His Leu Ile 180 185 190
  - Arg Val Glu Gly Asn Leu Tyr Pro Glu Tyr Leu Glu Asp Arg Gln Thr 195 200 205
  - Phe Arg His Ser Val Val Val Pro Tyr Glu Pro Pro Glu Ala Gly Ser 210 225 220

Glu Tyr Thr Thr Ile His Tyr Lys Tyr Met Cys Asn Ser Ser Cys Met 225 230 235 240

Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr Leu Glu Asp

Ser Ser Gly Asn Leu Leu Gly Arg Asp Ser Phe Glu Val Arg Val Cys 260 265 270

Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn Phe Arg Lys 275 280 285

Lys Glu Val Leu Cys Pro Glu Leu Pro Pro Gly Ser Ala Lys Arg Ala 290 295 300

Leu Pro Thr Cys Thr Ser Ala Ser Pro Pro Gln Lys Lys Lys Pro Leu 305 310 315 320

Asp Gly Glu Tyr Phe Thr Leu Lys Ile Arg Gly Arg Lys Arg Phe Glu 325 330 335

Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp Ala His Ala 340 345 350

Thr Glu Glu Ser Gly Asp Ser Arg Ala His Ser Ser Tyr Leu Lys Thr 355 360 365

Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Thr Met Val Lys Lys 370 375 380

Val Gly Pro Asp Ser Asp 385 390

- (2) INFORMATION FOR SEQ ID NO:4:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 11 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Arg Ala His Ser Ser His Leu Lys Ser Lys Lys

- (2) INFORMATION FOR SEQ ID NO:5:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 13 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

His Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His



- (2) INFORMATION FOR SEQ ID NO:6:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 11 amino acids

    - (B) TYPE: amino acid(D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu

- (2) INFORMATION FOR SEQ ID NO:7:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 13 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu

- (2) INFORMATION FOR SEQ ID NO:8:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 20 amino acids

    - (B) TYPE: amino acid (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

Arg Ala His Ser Ser His Leu Lys Ser Lys Gly Gln Ser Thr Ser

Arg His Lys Lys

- (2) INFORMATION FOR SEQ ID NO:9:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 20 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Ser His Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys 10 15

Leu Met Phe Lys 20

- (2) INFORMATION FOR SEQ ID NO:10:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 24 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

Arg Ala His Ser Ser His Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser

Arg His Lys Lys Leu Met Phe Lys 20

- (2) INFORMATION FOR SEQ ID NO:11:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 25 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Ser Arg Ala His Ser Ser His Leu Lys Ser Lys Lys Gly Gln Ser Thr

Ser Arg His Lys Lys Leu Met Phe Lys 20 25

- (2) INFORMATION FOR SEQ ID NO:12:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 27 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
    - (ii) MOLECULE TYPE: peptide
    - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

Gly Gly Ser Arg Ala His Ser Ser His Leu Lys Ser Lys Lys Gly Gln
1 10 15

Ser Thr Ser Arg His Lys Lys Leu Met Phe Lys 20 25

(2) INFORMATION FOR SEQ ID NO:13:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 11 amino acids
  - (B) TYPE: amino acid
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

Lys Lys Ser Lys Leu His Ser Ser His Ala Arg 5

38

- (2) INFORMATION FOR SEQ ID NO:14:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 8 amino acids

    - (B) TYPE: amino acid(D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Arg Ala His Ser Ser His Leu Lys

- (2) INFORMATION FOR SEQ ID NO:15:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 6 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

His Leu Lys Ser Lys Lys

- (2) INFORMATION FOR SEQ ID NO:16:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 5 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

His Leu Lys Ser Lys

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 5 amino acids
  - (B) TYPE: amino acid (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Leu Lys Ser Lys Lys

- (2) INFORMATION FOR SEQ ID NO:18:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 6 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Lys Ser Lys Lys Gly Gln

- (2) INFORMATION FOR SEQ ID NO:19:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 5 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Lys Ser Lys Lys Gly

- (2) INFORMATION FOR SEQ ID NO:20:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 7 amino acids
    - (B) TYPE: amino acid(D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Arg Ala His Ser His Leu Lys 5

HIN HIS CONTRACT AND HER HALL HAVE HAVE HELD HER HELD HER HALL HE HALL <u>ļ</u>.

- (2) INFORMATION FOR SEQ ID NO:21:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 5 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

His Lys Ser Lys Lys

- (2) INFORMATION FOR SEQ ID NO:22:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 28 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

Cys Gly Gly Ser Arg Ala His Ser Ser His Leu Lys Ser Lys Lys Gly

Gln Ser Thr Ser Arg His Lys Lys Leu Met Phe Lys 20

- (2) INFORMATION FOR SEQ ID NO:23:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 27 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Cys Gly Ser Arg Ala His Ser Ser His Leu Lys Ser Lys Lys Gly Gln

Ser Thr Ser Arg His Lys Lys Leu Met Phe Lys

- (2) INFORMATION FOR SEQ ID NO:24:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 27 amino acids

    - (B) TYPE: amino acid(D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide

(vi)	SECUENCE	DESCRIPTION:	SEQ	ID	NO:24:

Cys Gly Gly Ser Arg Ala His Ser Ser His Leu Lys Ser Lys Gly
1 10 15

Gln Ser Thr Ser Arg His Lys Lys Leu Met Lys 20 25

#### (2) INFORMATION FOR SEQ ID NO:25:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 26 amino acids
  - (B) TYPE: amino acid
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Cys Gly Ser Arg Ala His Ser Ser His Leu Lys Ser Lys Lys Gly Gln

Ser Thr Ser Arg His Lys Lys Leu Met Lys 20 25

### (2) INFORMATION FOR SEQ ID NO:26:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 1215 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM: Homo sapiens

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

GAATTCAACC AGCAGCCTCC CGCGACCATG GAGGAGCCGC AGTCAGATCC TAGCGTCGAG 60 CCCCCTCTGA GTCAGGAAAC ATTTTCAGAC CTATGGAAAC TACTTCCTGA AAACAACGTT 120 CTGTCCCCCT TGCCGTCCCA AGCAATGGAT GATTTGATGC TGTCCCCGGA CGATATTGAA 180 CAATGGTTCA CTGAAGACCC AGGTCCAGAT GAAGCTCCCA GAATGCCAGA GGCTGCTCCC 240 CCCGTGGCCC CTGCACCAGC AGCTCCTACA CCGGCCGCCC CTGCACCAGC CCCCTCCTGG 300 CCCCTGTCAT CTTCTGTCCC TTCCCAGAAA ACCTACCAGG GCAGCTACGG TTTCCGTCTG 360 GGCTTCTTGC ATTCTGGGAC AGCCAAGTCT GTGACTTGCA CGTACTCCCC TGCCCTCAAC 420 AAGATGTTTT GCCAACTGGC GAAGACCTGC CCTGTGCAGC TGTGGGTTGA TTCCACACCC 480 CCGCCCGGCA CCCGCGTCCG CGCCATGGCC ATCTACAAGC AGTCACAGCA CATGACGGAG 540 GTTGTGAGGC GCTGCCCCA CCATGAGCGC TGCTCAGATA GCGATGGTCT GGCCCCTCCT 600 CAGCATCTTA TCCGAGTGGA AGGAAATTTG CGTGTGGAGT ATTTGGATGA CAGAAACACT 660

TTTCGACATA	GTGTGGTGGT	ACCCTATGAG	CCGCCTGAGG	TTGGCTCTGA	CTGTACCACC	720
ATCCACTACA	ACTACATGTG	TAACAGTTCC	TGCATGGGCG	GCATGAACCG	GAGGCCCATC	780
CTCACCATCA	TCACACTGGA	AGACTCCAGT	GGTAATCTAC	TGGGACGGAA	CAGCTTTGAG	840
GTGCGTGTTT	GTGCCTGTCC	TGGGAGAGAC	CGGCGCACAG	AGGAAGAGAA	TCTCCGCAAG	900
AAAGGGGAGC	CTCACCACGA	GCTCCCCCA	GGGAGCACTA	AGCGAGCACT	GCCCAACAAC	960
ACCAGCTCCT	CTCCCCAGCC	AAAGAAGAAA	CCACTGGATG	GAGAATATTT	CACCCTTCAG	1020
ATCCGCGGGC	GTGAGCGCTT	CGAAATGTTC	CGAGAGCTGA	ATGAGGCCTT	GGAACTCAAG	1080
GATGCCCAGG	CTGGGAAGGA	GCCAGGGGGG	AGCAGGGCTC	ACTCCAGCCA	CCTGAAGTCC	1140
AAAAAGGGTC	AGTCTACCTC	CCGCCATAAA	AAACTCATGT	TCAAGACAGA	AGGGCCTGAC	1200
TCAGACTGAG	TCGAC					1215

- (2) INFORMATION FOR SEQ ID NO:27:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 27 base pairs

    - (B) TYPE: nucleic acid (C) STRANDEDNESS: single
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: DNA (genomic)
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM: Homo sapiens
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

#### GAGAGCCCCA GTTACCATAA CTACTCT

27

- (2) INFORMATION FOR SEQ ID NO:28:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 30 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: DNA (genomic)
    - (vi) ORIGINAL SOURCE:
      - (A) ORGANISM: Homo sapiens
    - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

#### ATCACGTGAT ATCACGTGAT ATCACGTGAT

30

- (2) INFORMATION FOR SEQ ID NO:29:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 26 base pairs

    - (B) TYPE: nucleic acid (C) STRANDEDNESS: double (D) TOPOLOGY: linear

	(11) MOLECULE TIPE. DIA (GENERAL)	
	(vi) ORIGINAL SOURCE: (A) ORGANISM: Homo sapiens	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:	
CCCG	AACATG TCCCAACATG TTGGGG	26
(2)	INFORMATION FOR SEQ ID NO:30:	
	(i) SEQUENCE CHARACTERISTICS:  (A) LENGTH: 30 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: double  (D) TOPOLOGY: linear	
	(ii) MOLECULE TYPE: DNA (genomic)	
	(vi) ORIGINAL SOURCE: (A) ORGANISM: Homo sapiens	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:	
TCG	AGCATGT TCGAGCATGT	30
(2)	INFORMATION FOR SEQ ID NO:31:	
,	(i) SEQUENCE CHARACTERISTICS:  (A) LENGTH: 30 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: double  (D) TOPOLOGY: linear	
	(ii) MOLECULE TYPE: DNA (genomic)	
	(vi) ORIGINAL SOURCE: (A) ORGANISM: Homo sapiens	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:	
CCG	GGCATGT CCGGGCATGT	3 (
(2)	INFORMATION FOR SEQ ID NO:32:	
	(i) SEQUENCE CHARACTERISTICS:  (A) LENGTH: 5 amino acids  (B) TYPE: amino acid  (D) TOPOLOGY: linear	
	(ii) MOLECULE TYPE: peptide	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:	
	Lvs Ser Lvs Lvs Gln	

- (2) INFORMATION FOR SEQ ID NO:33:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 8 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

Arg Ala His Ser Ser His Lys Lys 5

- (2) INFORMATION FOR SEQ ID NO:34:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 6 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

His Leu Lys Ser Arg His.

- (2) INFORMATION FOR SEQ ID NO:35:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 20 base pairs

    - (B) TYPE: nucleic acid(C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: DNA (genomic)
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM: Homo sapiens
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

TGGCATGTCA TGGCATGTCA

20